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Sexual autonomy and contraceptive use among married or cohabiting female youth: insights from recent Ghana demographic and health survey

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Abstract

Introduction The use of contraception has been effective in reducing unwanted pregnancy and sexually transmitted infections. However, it is not widely embraced by sexually active young people. The study aimed to investigate sexual autonomy and contraceptive use among married or cohabiting young women.

Methods This study analysed the 2022 Demographic and Health Survey data. A total sample of 1003 (weighted) women aged 15–24 years were included. Frequency and percentages were computed at the univariate level and chi-square test at the bivariate level. At the multivariable level, binary logistic regression was conducted to determine the influence of sexual autonomy on contraceptive use.

Results Majority of the participants had secondary or higher education, 85.1% were aged 20–24 years and 53.6% resided in rural areas. The results showed that 91% of the participants had sexual autonomy and 44.5% were using contraceptives. Exactly 94% of the participants with sexual autonomy were using contraceptives. At the bivariate level, women with sexual autonomy were two times more likely to use contraceptives (COR = 2.06; 95% CI: 1.12–3.77) compared to their counterparts. The relationship between sexual autonomy and contraceptive use was not statistically significant at the multivariable level.

Conclusion These findings suggest that the apparent influence of sexual autonomy on contraceptive use is largely shaped by broader socioeconomic and relational determinants, underscoring the need for multifaceted interventions that address regional and partner dynamics, alongside individual empowerment. This study has demonstrated that cohabiting and married young women in Ghana reported high sexual autonomy and relatively low contraceptive use. This implies that married and cohabiting young women might be overlooked by youth-friendly services that often target the unmarried.

Keywords Sexual autonomy, Contraceptive use, Married young women, Cohabiting, Ghana

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Introduction

The term "youth" refers to individuals aged 15–24, encompassing both adolescents (aged 15–19) and young adults (aged 20–24) [1]. The global youth population is large and growing, with about 1.2 billion young people—16% of the world's total—in 2015, and projections indicating a rise to 1.3 billion by 2030 [2]. Africa is experiencing the fastest expansion: its 226 million youth in 2015 are expected to increase by 42% by 2030 and to double by 2055. This demographic momentum positions Africa as the epicenter of global youth growth, carrying significant implications for education, employment, health, and development planning [2].

The youth encounter several challenges regarding sexual and reproductive health. In Africa, teenage pregnancy is still a significant public health issue. For example, one in five girls becomes pregnant before the age of 19. The burden is especially severe in countries such as Niger and Chad, where nearly half of adolescent girls experience early pregnancy, and in Equatorial Guinea, where the rate is 43% [3]. Pregnancy-related complications are the primary cause of death among adolescent girls and contribute to 15% of all deaths among women under 26 years old [4]. Furthermore, a considerable number of teenage girls and young women are diagnosed with HIV compared to their male peers. In sub-Saharan Africa, the rate of HIV infection is twice as high among adolescent girls and young women in comparison to adolescent boys and young men [5].

Contraceptives are effective in preventing unwanted pregnancy and sexually transmitted infections, but sexually active young people do not widely embrace it. Research indicates that while young people have a good understanding of contraceptives, it does not necessarily translate into they using them. In Africa, there is a significant unmet need for contraceptives among female youth. For instance, a study in Congo revealed that 30% of adolescents and 40% of young people did not have access to contraceptives, and only 16.5% reported using contraceptives [6]. A recent study on contraceptive use among sexually active adolescents in twenty-five sub-Saharan African countries found a prevalence of 25.4%. The study also found that contraceptive use was more common among adolescents with higher education, those who had children, and unmarried adolescents [7].

In addition to socio-demographic factors, studies have discovered a strong connection between sexual autonomy and the use of contraceptives [8, 9]. Sexual autonomy is crucial for optimal sexual health and refers to the fundamental right of individuals to make knowledgeable decisions about their bodies, sexuality, and sexual experiences [10]. This autonomy empowers women to take control of their sexual encounters, recognize their sexual desires irrespective of societal expectations, and assert authority over their own sexual decisions. Preserving a sense of independence in sexual matters is essential for encouraging healthy sexual development, nurturing respectful sexual relationships, and minimizing the likelihood of adverse sexual health consequences. Sexual autonomy includes the ability to refuse sexual intercourse and insist on the use of condoms [11].

The connection between sexual autonomy and the use of contraceptives has been explored in studies involving adult women. For example, research in Nigeria and Malawi discovered that women with a high level of sexual freedom were more likely to use modern forms of contraceptives [8, 9]. Young women are at a greater risk of experiencing violations of their sexual and reproductive rights. They may be compelled or coerced into unwanted sexual activities, such as rape and early marriage, and lack adequate knowledge about their sexual and reproductive rights, as well as access to health services, including family planning [12]. It is therefore essential to empower young women to understand and assert their rights, including rejecting unwanted sexual advances and insisting on condom use.

Unintended pregnancy and unsafe abortion among young women are significant public health issues in Ghana. According to available data, between 2016 and 2020, Ghana documented 542,131 pregnancies among girls aged 15–19 years and 13,444 pregnancies among young teenagers aged 10–14 years [13]. Approximately 70% of adolescent pregnancies are unintended [14]. Research has indicated that 26% of Ghanaian female youth have experienced induced abortion [15]. However, contraceptive use among the youth in Ghana is generally low and has been declining over time. For example, in 2017, contraceptive use among sexually active adolescent girls and young women was 35.6% and 48.8%, respectively. In comparison, the prevalence among the same population was 43.7% and 53.4% in 2014, and 66.6% and 74% in 2008 [16]. The decrease in contraceptive use among Ghanaian youth has important public health implications.

Sexual autonomy empowers women to make independent decisions about their reproductive health, including contraceptive use [17]. The connection between sexual autonomy and the use of contraceptives has been explored in previous research conducted in Ghana [18]. For instance, a survey that included participants from both Kumasi and Accra revealed that reproductive independence was linked to the use of modern contraceptives during the most recent sexual encounter among young women [19]. Another study involving women of reproductive age(15–49 years) indicated that the autonomy of women was independently correlated with the use of modern contraceptives [20]. However, there is limited literature regarding sexual autonomy and contraceptive

use among married or cohabitating adolescent girls (15–19 years) and young women (20–24 years) in Ghana. This population is sexually active, yet their contraceptive behaviours have not been well explored in the literature [21]. Yet their experiences can differ markedly from their unmarried peers because entry into a marital or cohabiting union often entails unique social expectations, increased fertility pressures, and negotiation of reproductive decisions within a partnership. These dynamics may shape contraceptive use and autonomy in ways not captured in studies of unmarried youth.

This study can offer specific insights into the distinct reproductive health needs and obstacles faced by younger women in marital or cohabiting relationships. By understanding how sexual autonomy impacts contraceptive use, this research can contribute to strategies aimed at empowering young women, potentially resulting in increased contraceptive uptake and enhanced reproductive health outcomes. The results of this research can guide policies and interventions that target the barriers to contraceptive use among young married or cohabiting women, potentially leading to more effective family planning programs. This study sought to investigate the relationship between sexual autonomy and contraceptive use among married and cohabiting young women leveraging nationally representative data.

Methods

Study design and source of data

The study analysed data from the 2022 Demographic and Health Survey (2022-GDHS). The data was downloaded from the DHS program website after written permission. The 2022-GDHS was implemented by the Ghana Statistical Service with support from ICF from 17 October 2022 to 14 January 2023. The survey aimed to provide comprehensive data on key demographic and health indicators such as reproductive health, including family planning and women empowerment. This information is important to inform policymaking, program evaluation, and the monitoring of health and demographic trends in Ghana.

Population and sampling

The target population for the women section included women of reproductive age, thus age 15–49. The survey employed a stratified two-stage cluster sampling approach. The 2021 Population and Housing Census list was used as the sampling frame. Enumeration areas (clusters) were selected in the first stage and households were selected in the second stage. 618 clusters were selected from the sampling frame using probability proportionate to size for urban and rural locations in each of the 16 regions in the country. In the second stage, the household lists were updated through household listing in each of the selected clusters. The updated list served as a sampling frame for the random selection of households. The survey randomly selected a fixed number of 30 households from each cluster. Detailed sampling procedure is available at the DHS program website (www.dhsprogram.com). This rigorous design ensures representation at both national and sub-national levels. The 2022-GDHS successfully interviewed 15,014 women aged 15–49 years (98% response rate). This study focused on women aged 15–24 years either married or cohabiting. In addition, those who were pregnant were excluded from the analysis. Therefore, a total of 1003 (weighted) married or cohabiting women aged 15–24 years were included in this analysis.

Study variables and measurement

This study focused on contraceptive use as the outcome variable, which was determined from responses to the question: *"Are you or your partner using any of the following methods to prevent pregnancy: deliberately avoiding sex on certain days, using a condom, practicing withdrawal, or using emergency contraception*?" In the dataset, responses were coded as "yes = 1" or "no = 2". For this analysis, a binary outcome was created by categorizing all respondents who reported using 'no method' as "0", and those using any method (traditional and modern methods) as "1" [7, 22]. Young women may prefer a variety of contraceptive methods to prevent pregnancy, especially due to fear of side effects and misconceptions about modern contraceptive methods [23]. Therefore, including all the methods captured the full spectrum of fertility regulation practices. This accurately represents young women lived experiences and contraceptive choices.

The primary independent variable is sexual autonomy, which is a composite score derived from three items. Participants in the GDHS were asked whether they can refuse their partner's sexual advances or request their partners to use condoms during intercourse, or whether it is justified to ask a partner to use condom if he has STI. These items have been consistently used by previous studies [20, 24]. The original response categories were 1 = Yes, 0 = No. A composite score was calculated ranging from 0 to 3. A score of 0 = low autonomy and 1–3 = high autonomy because any positive response reflects meaningful sexual decision-making ability, consistent with prior DHS-based studies [25]. Other independent variables were age and educational level of respondents, wealth index, religion, region, type of place of residence, exposure to mass media and exposure to family planning messages. Moreover, partner's age, occupation and level of education, decision-making about contraceptives and barriers to accessing healthcare were included in the model.

Analysis of data

Analysis of data was done using STATA/SE version 17.0 for windows (StataCorp, College Station, Texas, USA). The analysis accounted for sampling weights, clustering, and stratification, to reflect the complex survey design methodology. This is important to obtain accurate variable estimates. The analysis involved summarizing variables using both descriptive and inferential statistics. Frequency and percentage were used at the univariate level. At the multivariable level, a binary logistic regression was conducted to determine the influence of sexual autonomy on contraceptive use, using both crude and adjusted analyses. This stepwise approach ensured that the analysis directly addressed the study objective of assessing the relationship between sexual autonomy and current contraceptive use among young women in union. Variables significant at $p < 0.05$ in bivariate analyses were included in the multivariable logistic regression to maintain a parsimonious model and focus on the most robust predictors, consistent with guidance for explanatory rather than predictive modeling. The results were reported at 0.05 significance level and 95% confidence interval (CI). Prior to multivariable analysis, we assessed multicollinearity using the variance inflation factor (VIF), with all variables showing VIF values < 5, indicating no serious multicollinearity. Model fit was evaluated using the Hosmer–Lemeshow goodness-of-fit test.

Ethical considerations

The 2022 GDHS protocol was approved by the Ghana Health Service Ethics Review Committee and the ICF Institutional Review Board. Prior to data collection, informed consent was obtained from all survey respondents, and confidentiality and privacy were prioritized during data collection. A further analysis of the DHS data does not require ethics approval.

Results

Participant characteristics

About 80% of the participant had secondary or higher education, 85.1% were aged 20–24 years and 21% were in the poorest wealth index. More than half of the participant resided in rural areas (53.6%) and 14.6% lived in the Ashanti region. Regarding frequency of mass media exposure, 91.5%, 41.4%, 32.2% of the participants did not read newspaper, listen radio or watch television respectively. In addition, 65.4% of the participants indicated that their husband/partner had attained secondary school education, 3.6% said their partners were unemployed and 41.7% said their partners were aged 25–29 years.

The results showed that 91% of the participants had sexual autonomy and 44.5% were using contraceptives. Moreover, four in ten participants indicated that they take contraceptive decisions alone. Regarding exposure to family planning information, 32.4% of the participants were exposed to family planning on radio, 36.9% on television, and 2.9% in a newspaper. The results also showed that 88% of the participants did not have problems with seeking permission to access care, 76% did not have a problem with distance to the health facility, 59% did not have a problem with money to access care and 85% did not have a problem with going to the health facility alone.

Additionally, the results showed that there was a significant association between educational status, wealth index, place of residence, region, partner's education, partner's occupation and contraceptive use. In addition, frequency of reading newspaper, watching television, and exposure to family planning information in newspaper were significantly associated with contraceptive use. Distance to the health facility, access to money, not wanting to go to the health facility alone, and decision-making about contraceptive use were also significantly associated with contraceptive use.

The relationship between sexual autonomy and contraceptive use was also statistically significant ($p < 0.05$). For example, 94% of the participants with sexual autonomy were using contraceptives. In addition, 75% of the participants with secondary/higher education, 54% of those residing in rural areas, and 65% of those whose partner/husband had secondary education were using contraceptives. A majority of the participants who did not have a problem with distance (82.5%) and 65% of those who did not have a problem with money to access to care were using contraceptives. Exactly, 46.5% of the participants who take joint contraceptive decision with their partners were using contraceptives (Table 1).

Factor associated with contraceptive use among married/cohabiting young women in Ghana

Two models, including crude and adjusted logistic regression, were computed to assess factors associated with contraceptive use among married/cohabiting young women in Ghana. In the crude analysis, women with high sexual autonomy were two times more likely to use contraceptives (COR = 2.06; 95% CI: 1.12–3.77) compared to their counterparts. The following covariates were significantly associated with contraceptive use at the crude level: educational status, wealth index, place of residence, region, exposure to FP information in newspaper, frequency of listening to radio and watching television. Other significant covariates include barriers to getting care (distance, money, not wanting to go alone), decision-maker about contraception and partner/husband factors like their educational status and age (Table 2).

In the adjusted logistic regression analysis, women in the richer wealth index (AOR = 2.05, 95% CI: 1.00-4.20) had increased odds of using contraceptives compared to those in the poorest wealth index. Women in the

Table 1 Participant characteristics and association with contraceptive use

Characteristics	*n* (%)	CPR (%)
Sexual autonomy		*
No	93(9.3)	6.1
Yes	910(90.7)	93.9
Education		***
None	158(15.8)	8.4
Primary	166(16.5)	16.1
Secondary /higher	679(67.7)	75.5
Wealth index		***
Poorest	293(29.2)	20.9
Poorer	219(21.8)	18.7
Middle	220(22.0)	26.4
Richer	202(20.2)	26.9
Richest	69(6.9)	7.1
Place of residence		*
Urban	412(41.1)	46.4
Rural	591(58.9)	53.6
Region		***
Western	57(5.7)	8.5
Central	99(9.9)	15.4
Greater Accra	87(8.7)	9.7
Volta	37(3.7)	3.6
Eastern	65(6.5)	8.3
Ashanti	146(14.6)	15.8
Western North	22(2.2)	2.6
Ahafo	21(2.1)	2.4
Bono	28(2.8)	3.1
Bono East	51(5.1)	3.1
Oti	38(3.7)	2.9
Northern	140(14.0)	9.0
Savannah	36(3.6)	1.7
North East	49(4.9)	2.1
Upper East	81(8.1)	7.8
Upper West	45(4.5)	4.1
Heard about Family Planning on radio		
No	678(67.6)	63.9
Yes	325(32.4)	36.1
Heard about Family Planning on television		
No	633(63.1)	59.6
Yes	370(36.9)	40.4
Heard about Family Planning in newspaper		*
No	974(97.1)	95.5
Yes	29(2.9)	4.5
Frequency of reading newspaper		***
Not at all	928(92.5)	91.5
Less than once a week	64(6.4)	6.8
At least once a week	10(1.0)	1.7
Frequency of listening to radio		
Not at all	415(41.4)	32.4
Less than once a week	226(22.5)	24.9
At least once a week	362(36.1)	42.7
Frequency of watching television		**
Not at all	323(32.2)	26.3
Less than once a week	134(13.4)	12.5
At least once a week	546(54.4)	61.3
Getting permission to seek care		
Big problem	120(12.0)	10.5
Not a big problem	883(88.0)	89.5
Distance to health facility		***

Table 1 (continued)

Characteristics	*n* (%)	CPR (%)
Big problem	239(23.9)	17.5
Not a big problem	764(76.1)	82.5
Distance to health facility		***
Big problem	239(23.9)	17.5
Not a big problem	764(76.1)	82.5
Money for healthcare		*
Big problem	415(41.4)	35.4
Not a big problem	588(58.6)	64.6
Not wanting to go alone		*
Big problem	148(14.8)	11.9
Not a big problem	855(85.2)	88.1
Decision-making on contraception		***
Respondent	397(39.5)	37.7
Husband/partner	183(18.2)	13.5
Joint decision	390(38.9)	46.5
Other	34(3.4)	2.0
Partner education		**
None	170(16.9)	10.2
Primary	112(11.2)	12.6
Secondary	614(61.2)	65.4
Higher	96(9.5)	10.8
Don't know	11(1.1)	1.0
Partner/husband occupation		*
Unemployed	36(3.6)	4.4
Services	348(34.7)	30.0
Skilled manual	330(33.0)	38.3
Other	288(28.7)	27.4
Partner/husband age		
15–24	217(21.6)	22.6
25–29	418(41.7)	45.7
30–35	277(27.6)	25.7
36+	91(9.1)	6.0
Age of respondent		
15–19	168(16.8)	14.9
20–24	835(83.2)	85.1
Contraceptive use		
No	556(55.5)	
Yes	447(44.5)	

*p-value < 0.05; **p-value < 0.01; ***p-value < 0.001, CPR: contraceptive prevalence rate

Upper West region (AOR = 0.37, 95% CI: 0.16–0.82) had reduced odds of using contraceptives compared to those in the Central region. In addition, women who had heard about family planning in a newspaper (AOR = 2.60, 95% CI: 1.11–6.06) had higher odds of using contraceptives compared to their counterparts. Women who take joint decision regarding contraceptives (AOR = 1.50, 95% CI: 1.04–2.16) were more likely to use contraceptives compared to those who make contraceptive decision alone. Moreover, women whose partners were aged 36 years and above (AOR = 0.50, 95% CI: 0.28–0.91) had reduced odds of using contraceptives compared to those whose partner were aged 15–24 years. Again, women who watch television once a week (AOR = 0.55, 95% CI: 0.31–0.98) had reduced odd of using contraceptives compared to their counterparts (Table 2).

Discussion

The results showed that nine in ten young women possessed sexual autonomy. This is a significant observation in the context of women's reproductive health and rights. Sexual autonomy is crucial for promoting sexual health and preventing adverse outcomes such as unintended pregnancies and sexually transmitted infections [19]. This finding aligns with previous research conducted in Ghana and other sub-Saharan African countries. For instance, a study analysing data from 30 sub-Saharan African countries found that approximately 61.7% of married or cohabiting women reported autonomy, with significant variations across countries. In Ghana, the prevalence was notably higher (74%), suggesting a relatively greater level of sexual autonomy among Ghanaian women compared to her neighbouring countries [25]. Adde et al. [26] also

Table 2 Crude and adjusted analysis of factors associated with contraceptive use among married/cohabiting young women in Ghana

Predictors	COR (95% CI)	AOR (95% CI)
Sexual autonomy		
No	1 (ref)	1 (ref)
Yes	2.06(1.12–3.77)*	1.08(0.58–2.02)
Education		
None	1 (ref)	1 (ref)
Primary	2.47(1.48–4.11)**	1.58(0.89–2.80)
Secondary /higher	3.17(2.00-5.04)***	1.59(0.90–2.79)
Wealth index		
Poorest	1 (ref)	1 (ref)
Poorer	1.31(0.90–1.91)	1.16(0.74–1.81)
Middle	2.45(1.55–3.86)***	1.60(0.85–2.98)
Richer	3.09(1.89–5.06)***	2.05(1.00-4.20)*
Richest	1.80(0.89–3.62)	1.06(0.42–2.67)
Place of residence		
Urban	1 (ref)	1 (ref)
Rural	0.67(0.47–0.95)*	1.06(0.69–1.61)
Region		
Central	1 (ref)	1 (ref)
Western	0.86(0.34–2.19)	0.79(0.30–2.10)
Greater Accra	0.43(0.15–1.23)	0.37(0.12–1.12)
Volta	0.32(0.14–0.72)**	0.37(0.16–0.86)*
Eastern	0.59(0.24–1.43)	0.61(0.24–1.56)
Ashanti	0.41(0.18–0.92)*	0.35(0.22–1.33)*
Western North	0.53(0.23–1.22)	0.55(0.22–1.33)
Ahafo	0.44(0.19-1.00)	0.69(0.29–1.66)
Bono	0.44(0.18–1.03)	0.46(0.18–1.14)
Bono East	0.16(0.07–0.37)***	0.21(0.09–0.46)***
Oti	0.22(0.10–0.50)***	0.30(0.14–0.64)**
Northern	0.17(0.08–0.35)***	0.25(0.12–0.52)**
Savannah	0.11(0.05–0.25)***	0.17(0.08–0.37)***
North East	0.10(0.04–0.22)***	0.17(0.07–0.40)***
Upper East	0.33(0.16–0.67)**	0.39(0.18–0.84)*
Upper West	0.29(0.14–0.63)**	0.37(0.16–0.82)*
Heard about FP on radio		
No	1 (ref)	
Yes	1.35(0.98–1.87)	
Heard about FP on television		
No	1 (ref)	
Yes	1.31(0.94-1,81)	
Heard about FP in newspaper		
No	1 (ref)	1 (ref)
Yes	2.86(1.10–7.41)*	2.60(1.11–6.06)*
Frequency of reading newspaper		
Not at all	1 (ref)	
Less than once a week	1.14(0.58–2.21)	
At least once a week	3.50(0.89–13.68)	
Frequency of listening to radio		
Not at all	1 (ref)	1 (ref)
Less than once a week	1.82(1.22–2.73)**	1.42(0.89–2.25)
At least once a week	2.08(1.42–3.04)***	1.45(0.98–2.15)
Frequency of watching television		
Not at all	1 (ref)	1 (ref)
Less than once a week	1.24(0.76–2.01)	0.55(0.31–0.98)*
At least once a week	1.76(1.25–2.47)**	0.74(0.46–1.17)
Getting permission to seek care		
Big problem	1 (ref)	
Not a big problem	1.29(0.83-2.00)	
Distance to health facility		

Table 2 (continued)

Predictors	COR (95% CI)	AOR (95% CI)
Big problem	1 (ref)	1 (ref)
Not a big problem	1.56(1.10–2.20)*	1.36(0.90–2.06)
Money for healthcare		
Big problem	1 (ref)	1 (ref)
Not a big problem	1.92(1.36–2.72)***	1.09(0.75–1.59)
Not wanting to go alone		
Big problem	1 (ref)	1 (ref)
Not a big problem	1.53(1.03–2.27)*	0.98(0.59–1.61)
Decision-maker on contraception		
Respondent	1 (ref)	1 (ref)
Husband/partner	0.68(0.45–1.05)	0.86(0.55–1.35)
Joint decision	1.54(1.07–2.22)*	1.50(1.04–2.16)*
Other	0.48(0.19–1.25)	0.51(0.20–1.30)
Partner education		
None	1 (ref)	1 (ref)
Primary	2.77(1.58–4.87)***	1.41(0.75–2.66)
Secondary	2.48(1.64–3.75)***	0.80(0.49–1.37)
Higher	2.80(1.51–5.18)**	1.15(0.54–2.40)
Don't know	1.79(0.29–10.94)	0.74(0.15–3.44)
Partner/husband occupation		
Unemployed	1 (ref)	
Services	0.53(0.24–1.17)	
Skilled manual	0.91(0.40–2.06)	
Other	0.63(0.28–1.38)	
Partner/husband age		
15–24	1 (ref)	1 (ref)
25–29	1.08(0.74–1.59)	1.13(0.75–1.69)
30–35	0.81(0.54–1.21)	0.73(0.47–1.15)
36+	0.47(0.27–0.81)**	0.50(0.28–0.91)*
Age of respondent		
15–19	1 (ref)	
20–24	1.27(0.85–1.89)	

*p-value < 0.05; **p-value < 0.01; ***p-value < 0.001

found that 91% of Ghanaian women of reproductive age (15–49 years) has medium sexual autonomy.

Several factors may contribute to the high levels of sexual autonomy observed among young Ghanaian women. For instance, more than half of the young women had secondary or tertiary education. Educated women are more likely to be informed about their rights and the implications of their sexual choices, enabling them to negotiate safer sexual practices [27]. Additionally, **s**hifts in cultural attitudes towards gender roles and women's rights in Ghana may have fostered an environment where young women feel more empowered to exercise sexual autonomy.

This finding has important implications, including positive sexual outcomes. Autonomous decision-making in sexual matters is linked to increased use of contraceptives, leading to reduced rates of unintended pregnancies and sexually transmitted infections [8]. High levels of sexual autonomy reflect progress towards gender equality and the empowerment of women, contributing to broader societal development goals. Going forward, longitudinal studies should be conducted to investigate the long-term trends and impacts of sexual autonomy on reproductive health outcomes. Additionally, qualitative research can provide deeper insights into the personal and societal factors influencing sexual autonomy among young women.

The reported contraceptive prevalence rate (CPR) of 44.5% among cohabiting or married young women aged 15–24 years aligns with findings from similar studies in Ghana. For instance, a cross-sectional survey in Accra found a CPR of 44% among young women aged 18–24 years [28]. Additionally, a nationally representative study reported a 43% contraceptive use rate among sexually active unmarried adolescent girls and young women aged 15–24 years [16]. When juxtaposed with data from other African nations, Ghana's CPR among young women appears moderate. For instance, a study analysing contraceptive use among adolescent girls and young women in twenty-nine sub-Sahara African countries reported CPR ranging from 5% in Chad to 59% in Lesotho [29]. This suggests a varying landscape of contraceptive adoption

across the continent. The disparities may be attributed to differences in educational attainment, cultural norms, availability of family planning services, and governmental policies promoting contraceptive use.

Several factors may explain the relatively low contraceptive prevalence among young women in Ghana. Prevailing cultural beliefs that prioritize large families can discourage contraceptive use among married young women [30]. Additionally, misconceptions about the safety and side effects of modern contraceptives contribute to hesitancy [23]. Cohabiting or married young women may experience greater pressure to conceive, influenced by their partners' or extended families' expectations, leading to lower contraceptive use compared to their unmarried counterparts [31]. The low contraceptive prevalence among young women in Ghana has significant implications. For instance, increased rates of unintended pregnancies can lead to unsafe abortion and maternal and infant morbidity and mortality. Uncontrolled fertility among young women could lead to high fertility rate and rapid population growth. These may have negative consequences on the health system and national development. It is therefore crucial for Ghana Health Service to implement comprehensive and tailored family planning programs targeting sexually active young women, emphasizing the safety, efficacy, and availability of various contraceptive methods. Expanding the availability of youth-friendly reproductive health services and training healthcare providers to offer supportive, non-judgmental contraceptive counselling could help increase contraceptive use among young women in sexual unions.

The research finding indicates that in the unadjusted analysis, married or cohabiting young women aged 15–24 years with sexual autonomy were twice as likely to use contraceptives. However, this association lost statistical significance after controlling for variables such as age, educational status, and wealth index. This suggests that while sexual autonomy may initially appear to influence contraceptive use, its effect is intertwined with other socio-demographic factors. In many sub-Saharan African contexts, gender and age norms may position younger women in sexual unions in subordinate roles, often requiring deference to older male partners or family members in reproductive decisions. Moreover, younger women are more likely to be economically dependent on their partners, face limited access to social and material resources, and be subject to cultural sanctions when asserting autonomy. Consequently, sexual autonomy—while an important indicator of agency—may not always translate into broader decision-making power for younger women. A similar study among women aged 15–24 revealed that reproductive autonomy in decision-making was positively associated with modern contraceptive use at last sex. However, the association diminished when social and contextual factors, such as stigma toward adolescent sexual and reproductive health, were considered [19].

On the contrary, studies among women of reproductive age (15–49 years) found that women with moderate to high autonomy had increased odds of using contraceptives compared to those with low autonomy. For example, research in Malawi demonstrated that women's autonomy significantly correlated with modern contraceptive use, even after adjusting for socio-demographic factors [9]. The discrepancy between the influence of sexual autonomy on contraceptive use among all women of reproductive age versus young women (15–24 years) can be attributed to several interrelated social and structural factors. For instance, young women, especially those in cohabiting or marital unions, may have lower decision-making autonomy than older women. Again, young women are more likely to be starting a family, hence high sexual autonomy may not translate into contraceptive use [32]. These findings highlight the complexity of factors influencing contraceptive use among young women. To enhance the realization of women's sexual autonomy, policy efforts should be linked with broader socio-economic empowerment initiatives. Integrating sexual autonomy promotion into existing livelihood and educational programs can strengthen women's capacity to make informed decisions about their sexual and reproductive health. Intersectoral collaboration—particularly among the ministries of health, education, and gender—could facilitate more holistic interventions that address both structural and individual-level barriers.

Strengths and limitations of the study

While our study provides important insights into sexual autonomy and contraceptive use, the findings should be interpreted in light of certain limitations. The reliance on self-reported data may have introduced recall or social desirability biases, potentially affecting the accuracy of some responses. Additionally, the cross-sectional design limits causal inference, meaning that the observed associations should be interpreted as correlations rather than direct causal relationships. Again, we did not disaggregate by narrower age groups within the married/cohabiting population due to the focus of our analysis. Future studies using larger or pooled DHS data should explore potential differences in contraceptive use between adolescents (15–19) and young adults (20–24) to better inform targeted interventions. Although we adjusted for several potential confounders, residual confounding cannot be entirely ruled out. Women's autonomy and contraceptive behaviours are shaped by complex, multidimensional social and contextual factors that may not have been fully captured in the DHS dataset. For instance, partner's gender attitudes, exposure to community-level gender

norms, and interpersonal relationship dynamics may influence both autonomy and contraceptive use. As such, the observed associations should be interpreted with caution, recognizing that the true effect of autonomy on contraceptive use may be underestimated or overestimated depending on the direction of unmeasured confounding. Nevertheless, the use of a nationally representative dataset and standardized data collection tools enhances the reliability and generalizability of our results.

Conclusion

This study has demonstrated that cohabiting and married young women in Ghana reported high sexual autonomy and relatively low contraceptive use. While sexual autonomy was initially associated with increased contraceptive use among young women, its effect was mediated by sociodemographic factors, exposure to family planning information and partner factors. This underscores the multifaceted nature of contraceptive behaviour, where autonomy interplays with socio-cultural determinants..

The findings suggest that interventions aiming to increase contraceptive use should adopt a holistic approach that not only promotes sexual autonomy but also addresses socio-cultural disparities. Future research should explore the complex interactions between sexual autonomy and socio-demographic factors to design more effective family planning programs..

Abbreviations

DHS	Demographic and Health Survey
COR	Crude Odd Ratios
AOR	Adjusted Odd Ratios
CI	Confidence Interval
CPR	Contraceptive Prevalence Rate

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Author contributions

AAD, EAA contributed to the proposal development, EAA and JA contributed to data curation and data analysis. EAA and AAAB drafted the first manuscript draft and AAD and JA reviewed the manuscript. JA supervised the process of manuscript writing. All authors reviewed and approved the manuscript.

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Data availability

The authors cannot share the data used in this study because it is owned by The DHS Program. Interested persons may, however, contact The DHS Program for access to the data (https://dhsprogram.com/data/available-datasets.cfm).

Declarations

Ethics approval and consent to participate

The Ghana Health Service Ethics Review Committee approved the protocols for the 2022 Ghana Demographic and Health Survey. Informed consent was obtained from all adult participants and for participants aged 15–17 years, informed consent was obtained from their parents or legal guardians. A formal request to use the raw data was made to The DHS Program through their website (https://dhsprogram.com/data/ available- datasets.cfm). The study was performed in accordance with relevant regulations and guidelines. Data used in this study were anonymised before use.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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